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Importance of Mode Tetrachords in The Tonal and Modal Music Education

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Abstract

The concepts of modality and tonality which are often confused with each other have indubitable importance in music education. Unlike the concept of tonality which indicates the pitch of the sounds, modality is used in different cultures' music as well as in western music culture. In case, Tetrachords systems which constitute the basis of modes also constitute the major stones of tonality. Opposing to hard and strict rules of Western music, makam Tetrachords in eastern music do not remain in the same place, and further show differences as descending and ascending scales. Apart from that tonic (durak) and dominant (guclu) called maye istinat in Azerbaijan has always come to the fore. Therefore, all compared scales on the base of these important pitches are handled music differently in every culture. In this study, firstly, tonal music modes and their combination methods are examined, and secondly it is aimed to compare the modal music of Azerbaijan and Turkey according to their scales, but also this study examines their importance in the music education system. This study is important to light the way for students in their educational process and also provide the opportunities to compare the examples of folk music with western music.

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1. Introduction

Mode (from Latin *modus*: manner, way, method) is a form of scale which consists of a set of sounds and is combined according to some certain numerical proportion. The most important element which forms this scale is the interval between the sounds. Some sounds forming mode are "unmovable" while some others are "moving" sounds. These sounds may vary depending on their usage in the composition, as well as being determined by the proportion

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of the intervals. The tones determined based on interval proportions create a tetrachord. Tetrachords (from Greek) are descending series of four tones in Ancient Greek civilization. The term stems from the Greek words- tetra meaning "four" and chord "wire" (Say, 2005).

A tonic note in the scale (karar, or eksen) can establish a tonic for various sounds in the same scale within different cultures and approaches. Although this time is built within the same scale, various ethnic music samples appear in different karar degrees and their course around these degrees. In this study, it has been aimed to compare the tetrachords of tonal music modes and methods of their combination with the modal scales of Azerbaijan and Turkey, and it has also been investigated to reveal to what extent they are important in their music education system.

Tetrachord, an Ancient Greek mode, was widely used not only in Europe but also in the music theory system of the Eastern communities according to its content and structure. Musicologists who handled the modal music of the Eastern communities according to the tempered system formed makam scales based on the tetrachords (Elhankızı, 2012).

1.1. Tetrachords in the Azerbaijani makam system

Azerbaijani modes which are the indispensable part of the Eastern mode system have passed a long way of evolution up to the moment. Like the scholars of the Middle Ages, Uzeyir Hajibeyli, the founder of Azerbaijani music, also benefited from the formation features of medieval modes while creating theory in Azerbaijan mode (Babayev, 1998). Hajibeyli formed the theory of the Azerbaijani makam mode according to the tempered system. In this respect, he got exposed to criticism by those who opposed his ideas in his period.

Azerbaijan modes consist of the combination of 2 and 3 tetrachords. Therefore, in Azerbaijan modes scales may form out of 8 notes and more. Hajibeyli used the following tetrachords to create Azerbaijan modes:

- $1 + 1 + \frac{1}{2}$ main tetrachord - (the same with the first tetrachord of Ionia mode)
- $1 + \frac{1}{2} + 1$ auxiliary tetrachord - (the same with the first tetrachord of Dorian mode)
- $\frac{1}{2} + 1 + 1$ auxiliary tetrachord - (the same with the first tetrachord of Phrygian mode)
- $\frac{1}{2} + 1 + \frac{1}{2}$ diminished tetrachord
- $\frac{1}{2} + 1 + \frac{1}{2} + \frac{1}{2}$ with an increased second tetrachord

All above five tetrachords may be combined by all four ways of combination; however, not all the 20 scales obtained as a result of these combinations would be suitable to form Azerbaijan modes. Azerbaijan modes can be combined as in the following ways:

- Chain combination- which is a combination where the last tone of the lower tetrachord coincides with the first tone of the upper tetrachord.
- Mixed combination- which is a combination where the last tone of the lower and the first tone of the upper tetrachords form an interval of tone.
- Combination by intermediate semitone- which is a combination where an interval of the minor third ($1 \frac{1}{2}$ tone) is formed between the last tone of the lower and the first tone of the upper tetrachords.
- Combination by intermediate tone- which is a combination where an interval of the major third (2 tones) is formed between the last tone of the lower and the first tone of the upper tetrachords.

As mentioned above, Hajibeyli who makes use of 4 ways of combination to combine 5 tetrachords in accordance with rules and principles of Azerbaijani music has proposed 7 main and 3 auxiliary modes for Azerbaijani music system; main modes- rast, shur, segah, shushtar, chargah, bayati-shiraz, humayun, and auxiliary modes- shahnaz, chargah of the second type, and saranj (Hacibeyov, 1985).



Fig. 1. Azerbaijani makam modes-auxiliary modes

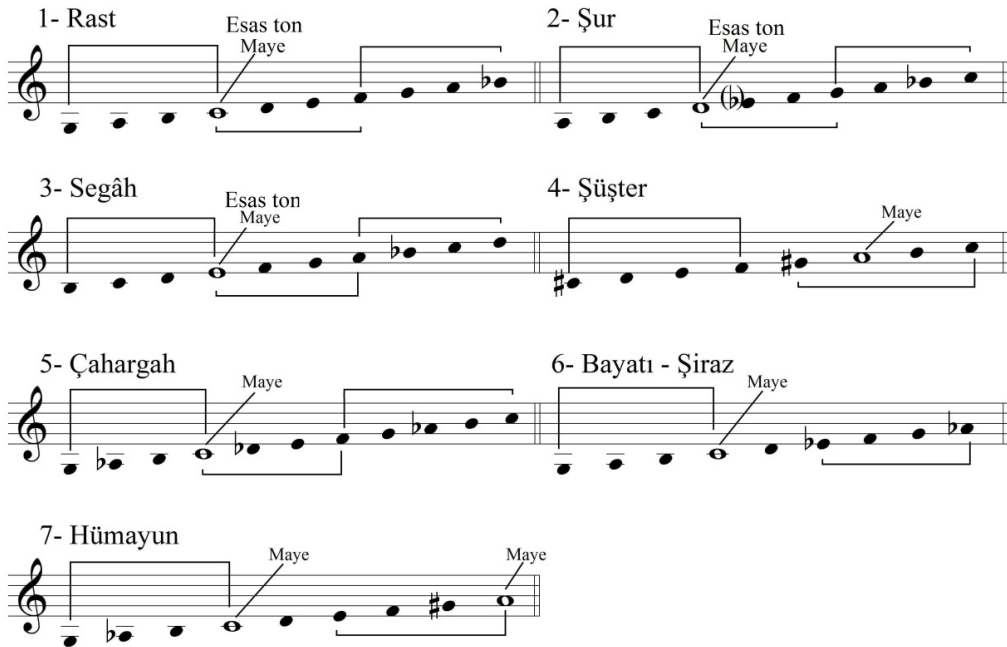


Fig. 2. Azerbaijani makam modes-main modes

As a result, it should be pointed out here that when scales of Azerbaijani modes, which Hajibeyli has created, are transposed to different notes from their original forms, any features of mode or makam does not change but just the name of maye degree changes (e.g., do–rast, re–rast and so on).

1.2. Tetrachords in the Turkish makam system

Musicologist composers who laid the foundation for the sound system of makam music and its related music notation, that is; the tampered system in accordance with the Western system are Hussein Sadeddin Arel, Kemal İlerici, Necdet Levent, Muammer Sun and so on (Sun, 1998). Turkish music makams are classified in three groups: simple makams, compound makams, and transposed makams (Özkan, 2013).

As seen in Azerbaijani makam scales, the tonic and dominant are also available in the modes of the Turkish makam music. When compared with Azerbaijani modes, here the tonic note serves as a maye pitch and the dominant ones serve as istinat pitches. However, unlike the Azerbaijani makams and thus makam scales, there are certain

notes which are accepted as each makam's own place. For example: a Turkish makam called Kaba Çargah starts on a Do-note. However, unlike the Azerbaijani makams, if Turkish makam scales or makams start on a different base note, they are called Şed makams, that is, transposed makams. It is certain that these transposed makams also have importance with their new features and tonic notes (Levent, 2009).

Modes constructed in the makam system of Turkish music are constructed from building blocks of a pentachord and a tetrachord, but not on two four-notes (Bulut, 2012). Thus, as seen in the Azerbaijani makam – scale system, modes form out of the construction of more tetrachords and pentachords, but not two (Fig. 3). In other words, scales are not limited to eight notes.



Fig. 3. Modes in the Azerbaijani makam-scale system

2. Conclusion

The following results will be obtained when the modes arising from the Turkish and Azerbaijani makam systems examined in the current study are compared with the Western music modes:

- Scales of the Turkish makam have 7 scales which are almost identical in the structure of the medieval modes (Fig. 4): Çargâh is similar to Ionia, Hüseyini to Dorian, Kürdi to Phrygian, Pencgah to Lydian, Yegâh to Mixolydian, Buselik to Aeolian, and Dilkeşhaveran to Locrian. According to Yavuzoğlu, Rast is similar to Ionia, Acemli Rast to Mixolydian, Uşşak to Aeolian, and Segâh to Locrian (2011).

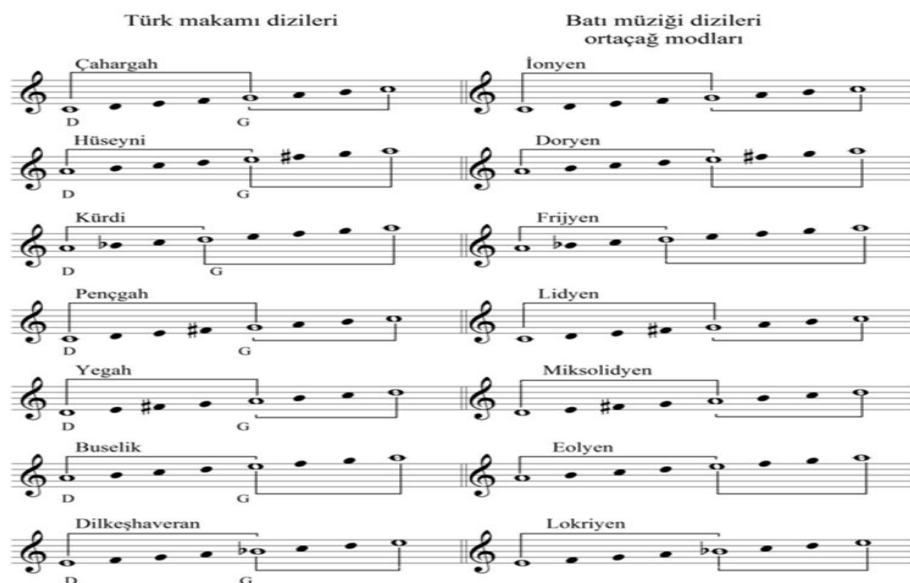


Fig. 4. Turkish makam scales and Western scales antique modes

- As for Azerbaijani makams, medieval modes are present in 2 scales: Rast – Mixolydian ve Shur – Phrygian. However, since in Shur scale, Mi-note may be either flat or natural, it is possible to compare this mode with the Aeolian (Fig.5).

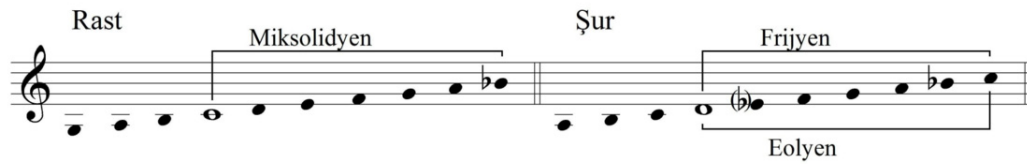


Fig.5 Comparasion of Rast and Sur modes

- Another similarity between Turkish makams and the Western scales is the presence of double harmonic modes. For example, Zirgüleli Hicaz is similar to the double harmonic major scale, while Neveser is similar to with the double harmonic minor scale (Fig.6).

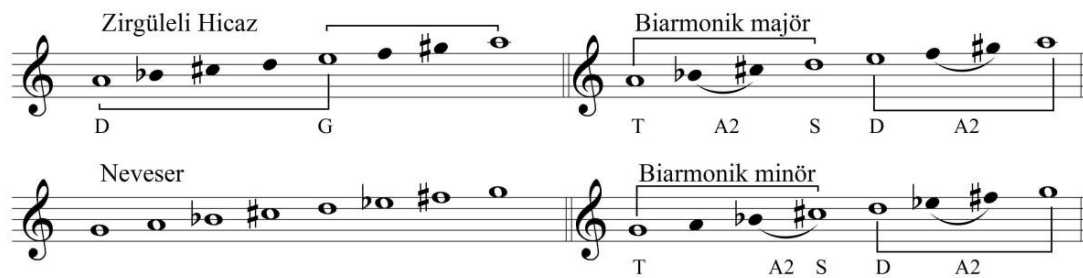


Fig.6 Comparasion of Zirguleli Hicaz and Neveser modes

- In Azerbaijani makam scales, on the other hand, double harmonic scale is the same with the scale of Chargah (Fig.7).



Fig.7 Double harmonic scale is the same with the scale of Chargah

- Suzinak, which is present in Turkish makam scales, is similar to the harmonic major in Western music (Fig.8).



Fig.8 Suzinak, and harmonic major in Western music

- This similarity is seen in the scale of Shahnaz in Azerbaijani makam (Fig.9).



Fig.9 Şahnaz, and harmonic major in Western music

- Nihavent makam which is present in Turkish makam scales is similar to harmonic minor as ascending, and to natural minor as descending in the Western music (Fig.10).



Fig.10 Şahnaz, and harmonic minor in Western music

- In Azerbaijani makam scales, the harmonic minor similarity is present in the scale of Bayati - Shiraz makam (Fig.11).



Fig.11 Bayatı-Siraz, and harmonic minor in Western music

Some researchers may criticize that we have examined makam scales according to the tampered system, but ultimately the study has produced a perspective. From this perspective, this study has the potential for providing valuable insights for students in their academic education and offering opportunities to compare the examples of folk music with western music.

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